

UNIVERSITY OF CALIFORNIA.

AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 38.

Investigations of Wines from Rare Grape Varieties.

Grown by the Natoma Water and Mining Company, Folsom, 1884.

Beclan.

The Beclan occupies rather a restricted area, chiefly in some of the vineyards of the Jura, where, however, it does not seem to be greatly appreciated. It succeeds admirably and yields excellent results in the granitic soils of the Beaujolais, northward of Lyon, and is highly recommended as yielding a deeply colored wine of high quality, agreeable and keeping well. The vine is fairly vigorous and resists diseases well, but should have a deep and strong soil. Though adapted to short pruning, it yields a larger product when long-pruned. The grape, which is rather small and somewhat thick-skinned, matures toward the beginning of the third epoch; is not easily affected by moisture.

We have no report from Folsom as to the vigor and productiveness of this vine. The grapes were gathered on the 25th of September, and when received were in good condition and fully ripe; taste agreeable, subacid and very sweet. The bunches corresponded well in form with the French type, but the berries were rather smaller and more closely packed.

The fermentation of 80.1 pounds crushed on September 26th began on the morning of the 28th, reached its maximum of 76.1° F. on the evening of the 29th, then gradually fell to the cellar temperature on October 3d, when the muck was drawn off, eight days from the crushing; the yield being 6.5 gallons from the above amount, or at the rate of 161.7 gallons per ton. Pomace 12.3 per cent.

The young wine, which seemed to clear itself very rapidly, was racked from the first lees on October 17th, then again on November 12th, when taking a sample for the Viticultural Convention

Record of Tasting, Nov. 11, 1884. (Pohndorff.) Color somewhat faded, but good; expression fine; fruity.

Report of Viticultural Convention Committee, first week of December.

Beclan. U. No. 33. The color of this wine is of fine ruby hue and great density, its astringency considerable and well proportioned; its mild, light, oily, fully vinous expression placing it on a level in regard to quality with Cinsaut. The Beclan partakes of a character midway between Burgundy and Medoc types, and may be useful in blends, as it is desirable for direct drinking.

Feb. 9, 1885. (Pohndorff.) Sample in 4-gallon keg: Color, deep ruby; development backward; taste too fresh, but indicative of good expression.

Blend of one-third Beclan and two-thirds Petit Bouschet in full bottle had cleared itself very well, its taste frank and good, an excellent type of a table wine. It should be noted that this was a sample of "turbids," left at the end of November last with an excessive proportion of lees in it; yet the latter had not in the least affected the clean taste and flavor of the wine, showing this type to be very easy to handle in the cellar.

April 9, 1885. (E. W. H.) The condition of the wine is bright, the color being of an intense purplish red. The bouquet is faint as yet, but very agreeable, the flavor vinous; the acid and astringency fair in amount, and agreeable. The wine dilutes remarkably well both as to color and taste.

April 27th. (Pohndorff.) An excellent wine of great promise.

Cabernet Franc.

The Cabernet Franc occupies a prominent place as one of the standard wine grapes of the Bordeaux region. It is a vigorous and hardy vine, which, wherever it is grown in a suitable soil, yields wines of high and delicate bouquet and of excellent keeping qualities. This characteristic bouquet is due to a peculiar flavor of the grape, which is maintained under the most diverse conditions of growth; while the grape-stems, highly charged with tannin, yield abundance of the latter substance, so as sometimes to render it desirable to exclude them from the vat. The berries resist rains and moisture remarkably well, so that they can be fully matured without fear of injury. Such full maturity, necessary for the production of the "great wines," can only be attained in climates at least as warm as that of Bordeaux, it being a grape of the second epoch of ripening.

The Cabernet succeeds especially in dry and stony soils, in which varieties of less vigorous habits could not prosper. In deep and rich soils it runs to wood and its berries lose largely their quality. It is a shy bearer, and must always be pruned long.

At Folsom the Cabernet Franc showed fair vigor, and although a light bearer it was somewhat more prolific than Cabernet Sauvignon and ripened a few days earlier. The grapes were gathered, fairly ripe, on September 18th, and again, more fully matured, on September 23d. The last invoice was mainly used for blends, the first being made into wine by itself. The grapes were quite acid to the taste and not very juicy, with a peculiar, faintly "foxy" aroma, and no very prominent astringency; the must showed only 19.9 per cent of sugar.

The fermentation of 121.2 pounds, crushed on September 20th, began on September 22d, and reached its maximum next morning at a temperature of 82.4° F.; then gradually fell to the cellar temperature on September 27th, when the muck was drawn off, seven

days from the crushing; showing a remarkably good and regular fermentation. The yield was 9.5 gallons, or at the rate of 156.5 gallons per ton; pomace, 10.3 per cent. The young wine was racked from the lees on November 14th, showing a clear, almost bright condition.

Record of tasting. Nov. 14th. (Pohndorff.) Color medium deep; taste showing a superabundance of vinous acids, proving that the grape should be combined with other varieties, but character excellent, with a pronounced, peculiar aroma.

First Week of December, 1884. Report of Viticultural Convention Committee:

Cabernet Franc, U. 24 gives evidence of the well known meritorious qualities of its grape. Its combination (U. 44) with one-third Grossblau has a certain degree of harshness which indicates a too heavy proportion of the latter grape, while U. 60, having with 15 per cent of Grossblau and 10 per cent of Black Prince and 15 per cent of Folle Blanche to 60 per cent of Cabernet Franc, proves to be quite distinct and advantageously combined.

This blend, however, showed the defect of taste and smell of sulphur, which was caused by this latter substance having been too freely put on the Cabernet Franc grapes in the vineyard, and notwithstanding the repeated washing of these grapes at the University laboratory, to free them from the adhering sulphur, the smell and taste had entered into the wine. This instance may teach that a very scrupulous handling of the delicate Medoc variety vines is indispensable.

U. No. 53, having to 64 per cent of Cabernet Franc, 9 per cent of Grossblau, 9 of Folle Blanche and 18 of Carignan (the latter grapes having imparted a slightly mouldy taste to the blend, impaired thereby in its frank impression), seemed also measurably harmonious, showing that it is desirable to study the proper combination of these varieties in different proportions.

U. blend No. 36, not noted in the catalogue, consisting of one-third of Petite Syrah and two-thirds of Cabernet Franc, is a successful combination.

Feb. 9, 1885. (Pohndorff.) Cabernet Franc in a 4-gallon keg is well advanced in its development, and shows the characteristic grand perfume of its variety; has depurated itself particularly well, but has felt the adverse circumstances due to the thinness of the staves. Comparing the hardness of the Cabernet Franc wine with that from the Cab. Sauvignon, the Noma samples prove the latter to be the more stable one. A sample of Cab. Franc in bottle on some lees, has developed beautifully, its taste being frank and expressive, body good, and color well preserved.

April 29. (E. W. H.) The condition of the wine is bright, color fine although only mod-

erately intense; bouquet developing slowly, but the peculiar flavor of the grape well pronounced, together with a markedly smooth, agreeable vinous taste. A sample preserved in a bottle since February is more harsh in taste, but bouquet better developed.

It should be noted that the Cab. Franc has thus shown here all the qualities attributed to it in France, including that of the hardness of the grape itself, which remained sound for several weeks, stored on shelves in the basement.

Cabernet Sauvignon.

The Cabernet Sauvignon is closely related to the Cabernet Franc, and greatly resembles it in most respects; it ripens a few days earlier, and is quite as good a keeper; its wine has a peculiar body and a great deal of bouquet and perfume; its color is somewhat deeper than that of the Cabernet Franc. The wine is fully as good a keeper as the latter, and matures a little more slowly, generally requiring one year more in the cask before bottling.

The Cabernet Sauvignon enters in a very large proportion of the wines of Lafitte, Mouton, Latour, Leoville, and most of the "Grands Crus." A soil of gravel mingled with clayey sand is that in which this vine prospers most; in marly soils it produces but little. It bears chiefly on the upper ends of the canes, hence requires long pruning; and in order to counteract the tendency to fruiting on the ends only, the canes are bent in training on trellises. The berries, which are rather small, are quite thick skinned, and have the peculiar flavor of all Cabernet varieties. They ripen somewhat late in the second epoch.

From Folsom the Cabernet Sauvignon is reported to be of fair vigor, and a light bearer. The grapes were gathered on September 24th, fully ripe; they were received in good condition at the University, and corresponded accurately to the description, also as regards the differences from the Cabernet Franc, the latter having looser bunches and smaller berries, and a more decided flavor.

The fermentation of 84.5 pounds crushed Sept. 25th, and showing 23.13 per cent of sugars, began on the morning of the 27th at 66.2° F., reached its maximum of 73.4° F. on Sept. 29th, the temperature of the room being 70° at the time, then fell slowly to the cellar temperature on Oct. 4th, when the murk was drawn off, 9 days from the crushing. Yield from the above amount 6.5 gallons, corresponding to 153 gallons per ton; pomace 17.2 per cent, being the largest of all the grapes worked, while that of juice was the smallest. It will be noted that the fermentation started very promptly, but progressed slowly, though steadily, the temperature rising but a few degrees above that of the cellar. The young wine was racked from the lees on Nov. 14th, and again on March 2d.

Record of Tasting. Nov. 14, 1884. (Pohndorff.) Excellent, of deep ruby color, and clean taste, though slightly affected by the sulphuring of the grapes.

First week of December, report of Vit. Convention Committee. (No record regarding the above pure sample.)

A sample of Cabernet Sauvignon U. No. 80, of Pfeffer, Santa Clara county, shows excellent qualities, and is of a velvety pleasant taste.

Blend U. 43, Cab. Sauvignon with Grossblauer, is inferior to No. 14, while blend U. 54, C. Sauvignon with Mourastel and Carignan, although the latter grape has imparted to it a taste of mold, showed distinctly the adaptability of this combination, which it would be well to continue trying in different proportions of the ingredients.

February 9, 1885. (Pohndorff.) Wine in a 4-gallon keg is well preserved; notwithstanding the thin staves, it is unimpaired in quality, and confirms the fine keeping qualities of the wine, or at least its easy handling in its first youth. Development very good, but compared with that in the vial (see below) is backward.

Sample in 1-gallon keg is equally well preserved and unaffected by the still greater thinness of the keg staves, allowing too easy evaporation and oxidation.

A bottle of the same which on Nov. 14th had thrown out the cork was kept without filling up. Taste still sound, flavor characteristic and color good.

A small remnant in a vial, only about one-fifth full, since Nov. 14th, has stood this heavy test of its stability remarkably well; color good, taste frank and very pleasant, flavor very expressive.

April 29th. (E. W. H.) Condition bright, color more intense than that of the Cab. Franc, but bouquet less developed, and wine altogether less smooth to the taste.

The table below gives results of the chemical analyses of the above wines, which were made at the end of November, after the first racking:

MUST.					
No.	Variety.	Date of Receiving Grapes.	Solid Contents by Spindle....	Acid as Tartaric, of Must	Acid as Tartaric, of Must
33	Beclan.....	Sept. 26	20.920	.435	.387
24	Cabernet Franc	Sept. 20	20.620	.619	.384
34	Cab. Sauvignon.	Sept. 26	22.670	.462	.495

WINE.					
No.	Variety.	Body.....	Alcohol by Weight.....	Alcohol by Volume.....	Tannin..... Acid as Tartaric.
33	Beclan.....	2.640	8.840	11.000	.053 .381
24	Cab. Franc.	2.840	9.630	12.000	.035 .480
34	Cab. Sauv'n	3.190	9.920	12.360	.079 .540

It will be noted that the differences here shown between the two Cabernets fall in the direction usually caused by difference in ripeness; one having been gathered three days before the other and crushed six days before. Probably the high acid and low tannin and sugar of the first are partly, at least, due to this cause. The Beclan, however, stands in decided contrast with the Cabernet Sauvignon, having been harvested and crushed at the same time, yet showing its lighter character in every respect save color.

Being light bearers of fruit, with a low yield of must, but producing delicate wines of high quality, the above three varieties will naturally be chosen chiefly by those who make a specialty of high grade wines.

E. W. HILGARD.

Berkeley, April 30, 1885.